

Autumn 2022

# LITTERAE POPULI

A news magazine presented by Hokkaido University





# Recent News from Hokkaido University



## Litterae Populi

Litterae Populi is a bi-annual magazine with the latest news about Hokkaido University. Its name is Latin for “letters of the poplar trees.”

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pr@oia.hokudai.ac.jp  
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Edited by the Litterae Populi Planning and Editing Team  
Photos by Hiromi Terashima (Kotoha-sha)  
Production assisted by Morikatsu Sato (Morikatsu Sato Design Office)  
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Cover photo taken at Central Lawn

## Feature: Inherit

Hokkaido University is celebrating the 146th anniversary since Sapporo Agricultural College opened its doors. We have been endowed with a rich heritage of educational, research, and social contributory activities conducted by our predecessors in the rich natural environment of this campus, as we develop various initiatives to achieve the SDGs.

Here we introduce three initiatives under the theme of “Inherit.”



Photo of Bust of Dr. William S. Clark





Aiming to establish a new regional model  
making the best use of our abundant resources

Vast field where Hokudai Robust Center (Research and Education Center for Robust Agriculture, Forestry and Fisheries Industry) is active.

Feature:  
**Inherit**

## **Research and Education Center for Robust Agriculture, Forestry and Fisheries Industry**

Space and resources on the earth are limited.

What is necessary to build a sustainable society on the earth, which is a closed system?

Hokudai Robust Center is making great strides in the development of engineering technologies for next-generation agriculture, forestry, and fisheries that will meet practical needs.





Biogas generated from cow manure is utilized as energy to heat our greenhouses. Director Ishii is the one who explains this mechanism.

and improving the research environment to promote joint research and provide educational activities related to the joint research. Notably, the Center actively collaborates with overseas organizations.

### Unique interdisciplinary research

Hokudai Robust Center develops various research activities. One of its representative initiatives is the “Robust Greenhouse Project.” Two greenhouses that have been built on Experiment Farm No.1 on the University’s campus are symbolic experimental spaces for interdisciplinary collaboration between the Research Faculty of Agriculture and the Faculty of Engineering.

The aim of this project is to research heat and light management technology for the typical Hokkaido climate, utilizing heat from biogas plants, and verifying new production methods that match the characteristics of agricultural products in Hokkaido. The Center also develops elemental technologies that help to improve the productivity of facility horticulture.

“This project started with the idea that if agriculture could join forces with engineering, such a project would be feasible,” said Director Ishii. For example, Professor Takashi Suzuki of the Research Faculty of Agriculture knew about the light wavelength conversion film developed by Professor Yasuchika Hasegawa of the Faculty of Engineering. Professor Suzuki then tried to examine the growth of hydroponic vegetables by using this film as greenhouse vinyl. As a result, he found that this method increased the speed at which the vegetables grow speeded up the growth rate of vegetable and increased the number of valuable components they contain. According to Director Ishii, it has the potential to improve earnings by increasing vegetable production in the future and lead to the development of vegetables with added value based on their components and functional properties.

We also provide research grants called “Robust Open Recruitment (\*3),” through public offering, and support applications for budding research involving cross-departmental members.

Many of the adopted proposals are unique. One example is a research project that establishes “Aquaponics” as a production platform, a full-fledged collaboration between the Research Faculty of Agriculture and the Faculty of Fisheries Sciences. Worldwide, “aquaponics” is attracting attention as a sustainable agricultural technology that is both productively and environmentally friendly. It is a cyclical aquaculture system in which fish farming and vegetable cultivation take place in the same tank, as vegetables are grown using fish excrement as fertilizer. On the other hand, the vegetables purify the water, thus improving the conditions for the fish to grow.

One of the research projects focuses on the active ingredients of colored beets. Colored beets have a strong antioxidant effect and are said to be effective at warming the human body, especially in cold environments. The research involves the extraction and analysis of active ingredients and to explore their future value for functional food.

“Another research project involves making baseball bats from Hokkaido-grown wood called Dakekamba. It is also interesting that some professors even wonder if it would be possible to popularize the use of Dakekamba by having players of the Nippon Ham Fighters use such baseball bats,” said Director Ishii. Interdisciplinary research, which is unique to a core university is actively performed.



Robust greenhouse. Here we conduct a forced cultivation experiment with spinach, parsley, and other vegetables by applying light wavelength conversion film.

### Seven special-interest groups developing various activities

Based on the wide range of fields covered by the Hokudai Robust Center, it has set up the following seven Special-Interest Groups (SIG) to proceed with their different research themes: SIG1: technology for efficiency improvement of production field; SIG2: commodity processing technology; SIG3: technology for long-term preservation of freshness;

In 2018, this center was established, mainly centered around the Faculty of Engineering, the Research Faculty of Agriculture, and the Faculty of Fisheries Sciences.

“It takes time to say the center’s official name; therefore we call it ‘Hokudai Robust Center,’” Kazuei Ishii, Director of Hokudai Robust Center, said smilingly.

“I am often asked, ‘What is Robust?’ simply put, the word portrays an image of resilience, namely, resistance to collapse or falling, even when affected by external influences. We consider that robust means to have the ability to anticipate external influences and prevent self-collapse.”

The external influences surrounding us are immeasurable. While the global environment is drastically changing, the world’s population is growing. How should we achieve stable food production and distribution with limited earthly resources? The word “robust” means to have internal resilience and the ability to withstand changes brought about by external disturbances such as environmental and climate changes.

Based on our most important mission of “Food Valley Concept,” Hokudai Robust Center aims to make the food value chain (\*1) robust by incorporating the concept of production engineering into the agriculture, forestry, and fisheries industries.

“Industries in Hokkaido are centered on the primary food-related industries. Hokkaido University is also more active in field research than other universities. We take advantage of these opportunities to make the food value chain robust through field research. We try to achieve this goal in line with Society 5.0 (\*2) and we apply data-driven approaches. We are also taking the SDGs into account so that our activities will eventually lead to value chains for health, medicine, and pharmaceuticals,” said Director Ishii.

### Our role as a platform

Hokudai Robust Center promotes collaborative research by working with various organizations as a platform providing an incubation function. Partners are not limited to organizations within the University; a total of 428 people affiliated with 94 private companies and 39 research institutes or government agencies have been registered as Robust members.

The Secretariat of Hokudai Robust Center plays a coordinating role of matching research seeds and on-site needs. The Secretariat also fosters specialized human resources who can adapt to next-generation agriculture, forestry, and fisheries engineering by obtaining a budget





Kazuhiro Hirai is a Scientific Project Coordinator at Hokudai Robust Center. The Robust Center has been developing a wide variety of research, and coordinators are indispensable.

SIG4: production technology to match production with consumer taste; SIG5: biomass resource utilization and energy utilization technology; SIG6: disaster prevention (robustness of the production fields); and SIG7: international collaboration.

Each SIG separately or in combination has hosted or co-hosted symposia and seminars that provide opportunities to showcase their SIG research seeds to other robust members. However, research exchanges were restricted for a while due to the COVID-19 pandemic. Director Ishii mentioned that “Once speakers have presented their research seeds online, it tends to be the end of the story. On the other hand, we emphasize exchanging of ideas and networking by participants after presentations; therefore, opportunities for face-to-face interaction are important.”

Hokudai Robust Center annually exhibits presentations at the “Agribusiness Creation Fair” organized by the Ministry of Agriculture, Forestry and Fisheries (MAFF). In 2021, the theme was “Dairy Farming × Engineering: New Natural Cheese Development,” in collaboration with Rakuno Gakuen University. Hiroyuki Nakamura, the Vice Minister of MAFF, also visited our booth.

### Educational contributions

“The research exchanges have been a great stimulus—not only to us researchers, but also to students,” said Director

Ishii. Hokudai Robust Center also plays a vital role in education to foster next-generation specialized human resources.

“We have been offering a course titled ‘Environment and Human Beings: Robust Agriculture, Forestry, and Fisheries Engineering’ for first-year students at our university since last year. The aim of the course is to learn from the actual field for a sustainable society, and faculty members from Hokudai Robust Center serve as instructors in an omnibus format. When we asked students their opinion of the course, we received a good response that they understand the importance of interdisciplinary cooperation and the reality of researchers actually working to solve problems in their field,” he said.

“Universities are divided into different departments, which tend to be vertically divided hierarchies. Hokudai Robust Center may be able to help students understand the



This is the logo of Hokudai Robust Center. The logo forms the letter “R” of “Robust” and an image of creating many products from a seed (research seed).



These are unmanned agricultural tractors and members of the Laboratory of Vehicle Robotics. Professor Noboru Noguchi of this laboratory is the Vice Director of Hokudai Robust Center.

original intent of universities by showing them the actual interdisciplinary fields. Classroom lectures serve a good purpose, but I would like to introduce the various issues they face and let them discuss possible approaches to tackle the situation,” said Director Ishii enthusiastically.

### Aiming to solve local issues with an eye on the world

In June 2021, “Hokkaido Prime Bio-Community” was certified as a regional bio-community by the Cabinet Office. As the core institution in this community, Hokkaido University, with its strength in field research, is working with local governments and industry to make “Hokkaido; a longed-for place where everyone wants to be engaged in the agriculture, forestry, and fisheries industry.” Hokudai Robust Center is expected to contribute to the fields of carbon-neutrality and of smart agriculture, engineering, and fisheries. The center is also promoting the “center for forming a carbon-neutral food production community using local energy” project under the “support program of the platform for industry-academia co-creation (COI-NEXT)” by the Ministry of Education, Culture, Sports, Science and Japan Science and Technology Agency adopted in October 2021.

Hokkaido University was ranked 10th in the world and 1st in Japan in the overall “THE Impact Rankings

2022 (\*4).” In addition, concerning the 17 SDGs targets, Hokkaido University ranked 1st in the world for SDGs Goal 2, “Zero Hunger.” These marks are truly the result of the efforts of our predecessors, who have promoted field research on agriculture, forestry, fisheries, and other related fields by leveraging the strength of Hokkaido’s rich natural background. Hokudai Robust Center was formed by inheriting this will. Looking ahead to the world from Hokkaido, initiatives are underway to resolve issues to achieve the SDGs.

\*1: Value chain: the linkage of added value created through a series of activities leading to the provision of products and services to customers

\*2: Society 5.0: a concept of the future society advocated by Japan. It advocates a human-centered society that achieves economic development and the resolution of social issues through a system that highly integrates virtual and real space.

\*3: Robust Open Recruitment. The official name is “Robust Agriculture, Forestry and Fisheries Engineering research program.”

\*4: THE Impact Rankings: rankings by the British higher education magazine “Times Higher Education” visualizing the social contribution efforts of universities using the framework of the United Nations Sustainable Development Goals (SDGs)

TV program website  
(in Japanese)



The TV program “SDGs seeds - research to open the future,” produced by HBC (Hokkaido Broadcasting Co., Ltd.), introduced SDGs-related initiatives of Hokudai Robust Center in an easy-to-understand way. It can be viewed as video content.



## Field Science Center for Northern Biosphere Akkeshi Marine Station

Akkeshi Marine Station includes a main building (right) and an accommodation building (left). It also contains the Aikappu Museum of Natural History, where approximately 2,000 specimens are exhibited. These facilities have a long history, and material aging has become an issue.

# Looking at the world's oceans from the cliffs of eastern Hokkaido

Akkeshi Marine Station was founded in 1931 as Japan's only subarctic marine research station that mainly researches organisms in a cold current. It stands under the cliffs of Cape Aikappu, a scenic spot with spectacular views. Surrounded by the blessed natural environment of a national park, people engaged in a wide range of research and education on marine ecosystems.

### Modern architecture under cliffs and a blessed natural environment

Akkeshi Marine Station is located approximately 300 km east of the Sapporo campus. It is reached by leaving the urban part of Akkeshi Town and descending some 700 m by steep gravel road down cliffs at the end. A pier in front of the station extends into a shining green sea of seagrass beds.

The main building, built in 1931, has a unique architectural design, with a modern exterior and art deco interior, and was selected by DOCOMOMO Japan (\*1) as an example of "modern movement architecture in Japan." This area was designated as the Akkeshi-Kiritappu-Konbumori Quasi-National Park in 2021. "One of the

charms of this station is that it preserves an unspoiled natural environment," says Professor Masahiro Nakaoka, the Director of Akkeshi Marine Station.

He says that a wide range of research and education, mainly on marine ecology and biological oceanography, is conducted at this station. An average of 3,000 researchers and students from in- and outside Japan visit this station annually.

"Although it is a marine laboratory, at the back there are forests, rivers, lakes, and wetlands, so we have collaborated with researchers specializing in forest and terrestrial water to study how the inflow of inland materials through rivers affects coastal areas. A remarkable feature is its active involvement in research outside the ocean too,"

said Professor Nakaoka. In recent years, he says, activities related to the SDGs are also increasing, including environmental issues such as climate change, microplastics, and red tides, as well as the sustainability of local communities in the face of population decline.

### "Marine Ecology Course" to experience shipboard studies

Akkeshi Marine Station conducts more than ten field practicums for students from Hokkaido University, as well as universities in Japan as well as abroad. In late June, a marine laboratory course for third-year undergraduate students of the Department of Biology, School of Science was offered. Sixteen students boarded the Misago-maru, a 30-passenger vessel, and set sail from the Port of Akkeshi out to sea. The students were divided into groups to collect seawater and phytoplankton and observe the marine environment. Some students got seasick, but they all managed to complete their tasks.

In the afternoon, the students analyzed the collected seawater and observed plankton under a microscope in the laboratory. The aim of this course was to deepen students' understanding of marine ecosystems and cultivate their abilities to think about them through a series of experiences. A participating student commented, "It was more fun than I had imagined to actually experience exploration and observation on a ship. I have never studied the ocean in detail before, so everything I learned on this practicum was fresh and interesting."

### Collaborating with domestic and international research institutions to tackle the world's oceanic issues

In recent years, "Blue Carbon(\*2)" has been attracting attention as a new carbon sink that absorbs atmospheric CO<sub>2</sub>. Since beds of kelp and seagrass, such as the *Zostera marina*, in particular, have high carbon fixation capacity,



Professor Nakaoka  
The director of Akkeshi Marine Station/Field Science Center for Northern Biosphere, Hokkaido University

there are calls for their conservation and restoration to mitigate climate change.

Akkeshi Marine Station has long been observing the relationship between seagrass beds and their inhabitants



Students who are taking the "Marine Ecology Course"

and environment, with the focus on *Zostera marina*, which is widely distributed in temperate and subarctic regions of the Pacific and Atlantic Oceans in the northern hemisphere. It has also participated in many international projects, including ZEN (Zostera Experimental Network), to conduct comparative analyses on a global scale. "It is important to provide data to international research networks and identify commonalities and peculiarities within the world. At the same time, it is also important to conduct applied research to solve local problems and address individual issues. I believe this station has a research environment that can respond to global and local issues," said Professor Nakaoka. Recently, researchers at the station have also been working with Sony Group Corporation to develop a more accurate underwater survey system using the most advanced sensors and communication technology.

### Passing our inheritance on to the next generation

Professor Nakaoka has vigorously tackled a wide range of research and educational activities. "Through our research, we can now understand the roles and functions of seagrass beds. Next, we would like to create a system whereby local people can contribute to maintain the global environment by preserving such ecosystems and leading to local development. To achieve this, I believe scientists and various other related people should participate in the discussions. I also consider it important to nurture students who will work on such matters in the future," Nakaoka talked about his prospects.

We have inherited the natural environment, historical buildings, accumulated experience, and observation data over the past 90 years. Akkeshi Marine Station disseminates cutting-edge research results to the world using these resources and passes the marine ecological environment on to the next generation through various on-site experiences.

\*1: DOCOMOMO Japan: the Japanese branch of DOCOMOMO, an international academic organization aimed at the documentation and preservation of modern architecture

\*2: Blue Carbon: carbon that is isolated and stored in marine ecosystems. It sometimes refers to the carbon fixation capacity stored in the ocean through marine ecosystems.



The history of wine production in Hokkaido began with the establishment of the *Kaitakushi* (Hokkaido Development Commission) Winery in 1876 when the Sapporo Agricultural School was opened. This history was once interrupted before World War II but restarted in Ikeda Town, Tokachi, where Tokachi wine appeared in the 1960s. Over the next sixty years, the Hokkaido wine industry grew significantly, and many wineries were established in Furano, Nanae, Otaru, and other locations throughout Hokkaido.

On the other hand, Hokkaido's harsh winters constantly annoy producers, and there are still many issues to be addressed, such as the slow growth of harvest yields.

Many points in the processes of viticulture, wine-making (vinification) and marketing still need to be improved.

In light of this situation, Hokkaido has been hosting a training program for those involved in wine-making and related activities, starting in 2015 with the "Hokkaido Wine School," which was later renamed the "Hokkaido Wine Academy" (since 2016). Researchers from Hokkaido University have participated as lecturers. This project became one of the opportunities for cooperation between wine-making regions and local universities to develop the wine industry through education and research.

## The Center of Education and Research for Hokkaido Wines

# Growing Hokkaido into a true wine-making region

The Center of Education and Research for Hokkaido Wines was newly established in April 2022 as a center for multifaceted education and research on wine in Hokkaido. The Center will also work with the local community to develop a wide range of industries centered on wine and thus revitalize the local economy.

Feature:  
**Inherit**

This building is the former Sapporo Agricultural College, Department of Entomology and Sericulture (constructed in 1901) and was renovated to house the Hokkaido Wine Education and Research Center while preserving the original construction as much as possible.

## Forming a unique interdisciplinary center of the University

In April 2021, the course, "Laboratory for Nouvelle Vague of Hokkaido Wines" was established with donations from Nitori Holdings Co., LTD. and CO-OP Sapporo. This laboratory centers on Professor Teruo Sone (he also holds a position in the Applied Molecular Microbiology Laboratory of the Research Faculty of Agriculture). Other members include dedicated Specially Appointed Associate Professor Tomoyuki Sato and invited wine experts from other institutions.

One of the initiatives that Professor Sone especially focused on in this course was the "Sustainable Winemaking in Hokkaido" offered to all graduate students in the second semester of FY 2021. In an omnibus format, several lecturers from Hokkaido University and elsewhere gave lectures on topics ranging from viticulture to marketing, including wine tasting. Professor Sone hopes that graduate students with various specialties will find a connection between wine and their research, and that they will become Hokkaido wine supporters who promote these wines in Japan and abroad, in the future. As a result, more than sixty graduates attended this lecture, beating all expectations.

Another initiative he focused on was the "Hokkaido Wine Symposium" (February 15-16, 2022). Researchers and students from universities and research institutes in- and outside Hokkaido, winery workers, high school students, and others from various fields gathered to explore ways to develop Hokkaido's wine industry, with "sustainability" as the keyword.

The Center of Education and Research for Hokkaido Wines was established in April 2022 as a center that promotes comprehensive education and research on wine at the core, centered on the donated laboratory "Laboratory for Nouvelle Vague of Hokkaido Wines." The center attracts a diverse range of human resources, from the fields of natural science, such as meteorology, soil science, agronomy, microbiology, and agricultural engineering, to the social sciences, such as education, economics, geography, and marketing. Professor Sone says, "We hope to leverage the strengths of the comprehensive university and to pursue large-scale projects spanning a wide range of fields." They aim to develop interdisciplinary and advanced wine research.

At the same time as the center opened, the "Hokkaido Wine Platform" was also established. It functions as a consultation service to support wineries in Hokkaido together with the Hokkaido government and research institutes in Hokkaido. "We hope to identify issues facing the Hokkaido wine industry through this platform, which will eventually grow into an institution that can raise funds and provide various services," said Professor Sone.

## Toward sustainable development of the wine industry

The Center of Education and Research for Hokkaido Wines is currently operating in a room of the School of Agriculture building, but in April 2023 it will move to the former Department of Entomology and Sericulture building in the



"Sustainable Winemaking in Hokkaido," inter-graduate school classes, held a wine-tasting session (December 2021). Professor Sone is pouring wine. He says that it is important to not only have knowledge but also a sensory experience.



Hokkaido Governor Naomichi Suzuki and Hokkaido University President Kiyohiro Houkin discuss the future of the wine industry at the "Hokkaido Wine Valley" kick-off meeting (April 2022).

Elm Forest in front of the School of Agriculture. This former department building is the oldest existing building on the Sapporo campus. It will be renovated while preserving the original parts for the Hokkaido Wine Education and Research Center. It will be a center for research, promotion, and human resource development in the field of Hokkaido wines, with a wine cellar and even a café where people can enjoy wine, creating a space where citizens, students, producers, and researchers can daily talk with each other. This space is also expected to serve as a starting point for wine tourism in Hokkaido, creating a virtuous cycle of travel to wine-making regions in Hokkaido and revitalizing the Hokkaido economy.

The "All-Hokkaido" challenge to make Hokkaido a world-class competitive wine-making region has just begun, based on the combined wisdom that Hokkaido University has accumulated over its long history, and by expanding cooperation and collaboration in the relevant regions.





## Interview with the president

Guest

# SHISAI Satoko

CHUGAI PHARMACEUTICAL CO.,LTD.  
Head of Digital Transformation Unit,  
Executive Vice President

After working for IBM Japan Ltd. for over thirty years, Satoko Shisai moved to CHUGAI PHARMACEUTICAL CO., Ltd. She leads the DX (Digital Transformation) strategy to realize the "CHUGAI DIGITAL DAY VISION 2030."\*

President Kiyohiro Houkin, who has been promoting reforms with the intention of becoming an unparalleled university, interviewed Satoko Shisai, a graduate of the University, about her life, initiatives at Chugai Pharmaceutical, and her expectations of the University.

\*Chugai Pharmaceutical's vision for 2030: "Chugai innovates its own business through digital technology to make Chugai a top innovator to provide society-changing healthcare solutions."

Do not be afraid.  
Keep the challenging spirit  
alive.



**Sharpening my English skills and fostering internationalism during my student days**

**Houkin:** Firstly, please tell us about your background and why you studied at Hokkaido University.

**Shisai:** I was born in Nemuro City but moved around Hokkaido due to my parents' work. One of my Japanese teachers at Sapporo Minami High School suggested that women study law to have a solid career. This teacher's words triggered my decision to attend the School of Law at Hokkaido University.

**Houkin:** What was your student life like at Hokkaido University? I was in the rowing club and felt that the experience of also being dedicated to non-academic, extra-curricular activities during my student life were significant in nurturing a rich sense of humanity and expanding my relationships.

**Shisai:** Influenced by my father, who worked in international exchange, I thought it was essential to learn English and I therefore joined the ESS (English Speaking Society) club. Preparation for tournaments, contests, and debates was hard work, but the close relationship between seniors and juniors and the experience of learning from my seniors are still alive today. It may seem surprising since it is an English-speaking circle, but we always sang "Miyako zo Yayoi" after every event.

I still meet some of my seniors from ESS. For example, Mineko Hino, a professional conference interpreter, has been a shining star in debate competitions since those days and was a fantastic senior. We have been working together recently, and I feel a connection with her.

**Houkin:** The experience of going abroad as a student is also valuable. I went to Indonesia to study cholera.

**Shisai:** When I was a third-year undergraduate student, I participated in a speech contest sponsored by the Lions Club and was selected as a representative of Hokkaido. Therefore, I went to Edmonton (Alberta, Canada) during the summer vacation. It was my first experience abroad, and I enjoyed it so much that I could hardly sleep. I was also totally overwhelmed by the magnificent nature of Jasper National Park.



**Facing and overcoming various challenges and on the way forward**

**Houkin:** After graduation, you joined IBM, didn't you?

**Shisai:** I entered the workforce at a time when the Equal Employment Opportunity Law was enacted. However, although there were no ostensible differences between men and women, there were still vestiges of a male-centered perspective. I also felt there were low expectations of women in the industries that law students work, such as trading companies, banks, and insurance companies, so I



I feel that the experience of being dedicated to non-academic, extra-curricular activities during my student life has been significant in nurturing a rich sense of humanity and expanding my relationships.

– Dr. Houkin

focused my interviews on companies where women could work in the same way as men, regardless of the industry. At the time, IBM was the largest computer company in the world, and I was under the impression that men and women would be treated equally. After joining the company, I found that to be the case, so I believe that I made the right choice.

Today, many career women of my generation are working hard as the first women in various industries who have held a managerial track position. However, those days were still more challenging than today.

**Houkin:** What efforts did you make to create a comfortable

working environment for women in your company?

**Shisai:** Compared to other companies in Japan, it was overwhelmingly easier to work at my company, and I am very thankful. Women were promoted based on their abilities, and there were no differences between men and women. However, the sales department had only a few female workers, including myself, and women's roles in the workplace did not expand, so my other role was to successfully orient junior women to sales positions.

Among IBM companies operating globally, women at IBM Japan were not yet active in the



The experience of being taught by my seniors in the ESS (English Speaking Society) circle activities is still alive today.

– Ms. Shisai

company. Therefore, a group called the "Japan Women's Council" was established within the company, under the president's direct control. About thirty women from various divisions gathered to propose ways of improving the working environment. At one time I served as the leader.

It was important not only to make proposals but also to build a network among women who were aware of the issues. As a result, Yukako Uchinaga, the leader during the first term—who is still active as a businesswoman—launched the NPO Japan Women's Innovative Network (J-Win), with the involvement of other companies, while she was working for IBM, which led to the expansion of exchanges.

**Houkin:** You took a one-year leave of absence after you gave birth. Didn't you feel like you were falling behind compared to men who continued to work?

**Shisai:** It did not bother me much. As a result, I was reassigned to the public sector after I returned to work. At the time, IBM's share of public-sector demand was tiny. In this context, I decided to reset my career and start over again. I had a lot of freedom in my work, and the more I found and handled work independently, the busier I became.

In some cases, employees who return to work post-maternity leave were only assigned supportive tasks out of their supervisor's consideration, but that then becomes their regular work. As a result, they cannot return to their original duties. When there was such a female employee, I would sometimes push her to return to her primary duties.

**Houkin:** I think many people find it quite challenging to fill in the one-year gap, but the fact that you could do it smoothly is terrific. You are remarkably adaptable.

Next, please tell us about your experience working in the US.

**Shisai:** I felt like the career and confidence I had built up earlier had gone back to zero. Since I was assigned as a director, people would come to me at first when I launched a project. But employees of foreign companies would leave me if they found that participation in the project would not benefit them. I realized that kind of difficulty at the age of forty-five.

At first, I had a hard time communicating in English. No matter how hard it was, I had to consciously listen to what they said until I understood; otherwise, conversations would increasingly flow over me, and I would be left behind (laughs). All American employees are highly ambitious about their careers, so they will not wait for others or care about them. So, I had to be assertive and jump in. It was so awful that I developed a stomach ulcer.

Nevertheless, when I returned to Japan, the project I had created was finally taking shape, with the members consulting me on the details. As a result, I learned much about the importance of continuous communication.





## Benefiting alumni connections and being active in the new world

**Houkin:** In 2019, you moved to your current position as Executive Officer at Chugai Pharmaceutical.

**Shisai:** I was thinking about changing my career after the age of fifty-five and was looking for a new industry, targeting Japanese companies that would be a challenge for me. I then received an offer from Mr. Tatsuro Kosaka, the president of Chugai Pharmaceutical at the time, to serve as an officer to promote IT and DX (Digital Transformation) throughout the company. I had originally got to know Mr. Kosaka through the Tokyo Alumni association.

**Houkin:** The connections we have as Hokkaido University students are significant. A common background, such as studying at the same place, is meaningful. What kind of work are you currently doing?

**Shisai:** I implement IT and DX strategies from a customer's perspective. I create a vision of why we digitize and

what we aim at, and then build the system to put these theories into practice. It is exciting to design something from scratch and to create a mechanism that employees agree with and launch a project to materialize it.

**Houkin:** Reforms to digitize organizational activities are challenging both in the public and private sectors. Our university also needs to improve research, educational, and social contribution capabilities by digitizing education, research, and paperwork tasks. On the other hand, when starting such reforms there is a strong tendency to meet with resistance and calls to maintain the status quo.

**Shisai:** Initially, Chugai was also behind our industry peers. On the other hand, with a thousand researchers involved in in-house drug discovery development, there was value in utilizing digital and AI (artificial intelligence). Our employees have finally successfully used those technologies in loading images, searching articles, employing machine learning of antibody sequences, etc. DX of the research dimension is the most

important, but there are other areas in value chain DX, including product development, manufacturing, factories, and customer interface. For example, in recent years, due to the COVID-19 pandemic, we have not been able to meet with physicians, who are our customers, but efficient communication is now possible through digital technology.

Any digitalization reform is always accompanied by early adaptors (those who can adapt from the initial stage) and the late-comer majority (most employees, who take their time). When the early adaptors start to do well by launching projects, obtaining budgets, and creating successful cases, the majority will follow suit, because they are forced to do something about it. Of course, some people are still reluctant to go digital, but it is better not to try to convince those who cannot apply it or to pay undue attention to them.

**Houkin:** As you experienced, the alumni association is an opportunity to reconnect with those who have been active and established their position in society. I expect that you serve as a role model for active

female graduates.

**Shisai:** In my case, I had the great experience of being a fellow of Nitobe College through the alumni association. I am thankful for that learning experience.

**Houkin:** Finally, do you have any message for students and Hokkaido University?

**Shisai:** Companies are running out of human resources in digital and other new fields, so what I mostly expect from universities is human resource development. I would like to see the University produce more and more promising students. Students at Nitobe college are active, which leads to the attractiveness of Hokkaido University in the eyes of companies. Compared to when I was a student, there are now numerous opportunities to learn interdisciplinary knowledge and English. Teachers are enthusiastic about education, so I want students to challenge themselves to try new things.

**Houkin:** Thank you very much for your time today.

The alumni association provides opportunities to reconnect with those who have been actively engaged in work and have established their position in society. I expect that you serve as a role model for active female graduates.

– Dr. Houkin

## HOUKIN Kiyohiro

President, Hokkaido University

Born in Hokkaido in 1954. Graduated from Hokkaido University School of Medicine. Doctor (medicine) (Hokkaido University). Worked for Hokkaido University Hospital and other facilities since 1979. After working as a visiting researcher at the University of California, Davis, became an assistant professor at the Hokkaido University Graduate School of Medicine in 2000, professor of Sapporo Medical University School of Medicine in 2001 and professor of the Hokkaido University Graduate School of Medicine in 2010. After becoming the director of Hokkaido University Hospital/vice executive of Hokkaido University in 2013 and the director of Hokkaido University Hospital/vice president of Hokkaido University in 2017, assumed the present position in October 2020.



I had the great experience of being a fellow of Nitobe College through the alumni association. I am thankful for that learning experience.

– Ms. Shisai

## SHISAI Satoko

CHUGAI PHARMACEUTICAL CO.,LTD.  
Head of Digital Transformation Unit, Executive Vice President

Born in Hokkaido in 1963. Graduated from Hokkaido University School of Law and joined IBM Japan, Ltd. in 1986. Served as sales manager of the Second Public Service Department and then moved to IBM Corp. in the US in 2008. After returning to Japan, served as an executive officer at IBM Japan. Transferred to the position of executive officer at Chugai Pharmaceutical in 2019. Assumed present position in April 2022.



# Refining: Environmental Science



## Forecasting using meteorological data analysis and impact assessment to build a sustainable future

### YASUNARI Teppei J.

Associate Professor & Distinguished Researcher, Arctic Research Center

Ph.D. in the field of Earth System Science, Teppei J. Yasunari is engaged in research on air pollution, wildfires, snow and ice, and climate change. He completed a doctoral program at the Division of Earth System Science of the Graduate School of Environmental Science, Hokkaido University. He then served as a researcher at the Research Department of the Research Institute for Humanity and Nature (RIHN). After working at RIHN and undertaking research activities at NASA Goddard Space Flight Center for six years, he was appointed Assistant Professor at the Faculty of Engineering, Hokkaido University, in 2015. He assumed his present position in July 2021. He received the Young Scientists' Prize from MEXT in 2019 and the Meteorological Society of Japan – Hokkaido Award in 2021. He was also awarded the title of “Distinguished Researcher” by Hokkaido University in April 2022. He is a researcher with great promise for the future.

### Encounter with ice cores, a turning point in his life

Periodic reports by the “Intergovernmental Panel on Climate Change” (IPCC) have revealed the reality of global warming in recent years, and it has become an urgent issue to consider possible ways for humankind to survive in the future in view of global warming and the associated climate change. “Natural disasters,” “climate change,” “health,” and “air pollution” are essential keywords in the discussion of human sustainability. Associate Professor Teppei J. Yasunari of the Arctic Research Center at Hokkaido University is researching meteorology, atmospheric aerosols (air pollution particles), and glaciology in environmental science. He aims to develop findings directly related to the factors and impacts concerning those four keywords and to establish prediction and adaptation measures.

“When I was a high school student, I had the opportunity to observe an ice core (a cylindrical sample of snow and ice) collected from Antarctica visiting Hokkaido University’s School of Engineering. I was very impressed when I learned that information on the atmospheric environment over the past several hundred thousand years was preserved in this ice core and that we could learn about the atmospheric environment of those times by examining it,” says Associate Professor Yasunari. At the time, he wanted to be an architect, but this sparked his interest in scientific research. After graduating from Meikei High School, an integrated junior and senior high school (Tsukuba City, Ibaraki Prefecture), he entered Hirosaki University in Aomori Prefecture in 1999 to study meteorology. After graduating from Hirosaki University, he entered Hokkaido University’s Graduate School of Environmental Earth Science (master’s program) in 2003. He subsequently entered Hokkaido University’s Graduate School of Environmental Science (doctoral program) in 2005 and pursued research integrating glaciology and meteorology on atmospheric dust aerosols. “During research I performed in my graduate school days, I used ice cores drilled from an Alaskan glacier. Since studying meteorology at Hirosaki University, I had become very interested in research in a field where there are associations between ice core research (glaciology) and meteorology. My doctoral dissertation was based on the results of such research and led me to research air pollution in the cryosphere,” he recalls.

### Building an air pollution monitoring center

Associate Professor Yasunari completed the doctoral program at Hokkaido University’s Graduate School of Environmental Science in 2008. After working at the Research Institute for Humanity and Nature (Kyoto), he moved to the US and started working at Goddard Space Flight Center, one of the centers of National Aeronautics and Space Administration (NASA) in 2009. While working at NASA for six years (until 2015), he researched snow darkening by light-absorbing aerosols. “During this research period at NASA, I studied the impact of black carbon aerosols deposited on the Himalayan glaciers and developed [a module](#) to calculate the snow-darkening effect by the light-absorbing aerosols, which was also incorporated into the NASA’s Earth System Model, GEOS-5. [Global model simulations using this module also revealed the role of snow-darkening effect on spring climate in the Northern Hemisphere.](#)” he said. Associate Professor Yasunari joined the University’s Faculty of Engineering in 2015. To establish the University as a center (super-site) for constant monitoring of air pollution in northern Japan, he installed [a NASA’s AERONET](#) site for aerosol optical measurement in collaboration with NASA on the rooftop of the School of Engineering. He also installed [a ground-based lidar](#), equipment for observing vertical information of atmospheric aerosols using laser beams, in collaboration with the National Institute for Environmental Studies (NIES), and maintained the observation equipment to perform routine observation. In recent years, [his research group has developed a PM<sub>2.5</sub> measurement system for cold regions](#) that can be operated throughout the year (white box in the upper left corner of the photo on page 20: [a commercial version of the system](#)), even in frigid regions such as the Arctic and Antarctica, in collaboration with Nagoya University. He deployed this equipment inside (the Hokuriku, Tohoku, and

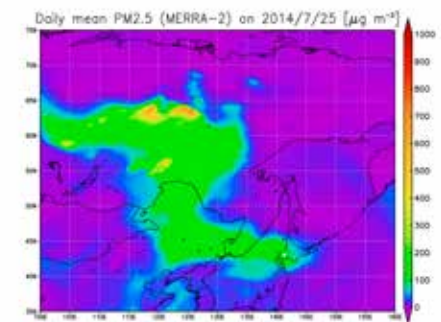
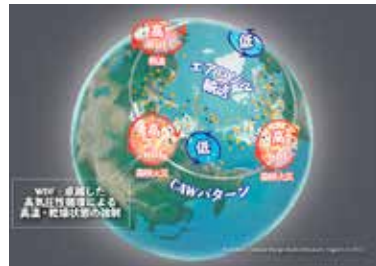


Figure 1. Highly-increased air pollution (PM<sub>2.5</sub>) flowed into Hokkaido (green area) due to Siberian wildfires in July 2014.  
(Figure 1b from Yasunari et al., 2018, doi:10.1038/s41598-018-24335-w)

Figure 2. The summer climate pattern revealed in 2021 by Yasunari et al. likely drives co-occurrences of European heatwaves and large-scale wildfires over Siberia and subpolar North America. This climate pattern is named as the circum-Arctic wave (CAW) pattern based on the feature of three high-pressure systems over Europe, Siberia, and subpolar North America that encircle the Arctic during the summer.

(Figure 9 from Yasunari et al., 2021, doi:10.1088/1748-9326/abf7ef) (The credit of this figure: “Hayanon, noguchi.m, 2021”)



Hokkaido regions) and outside of Japan (Alaska) to obtain data on air pollution in the cryosphere, including the Arctic.

Associate Professor Yasunari is currently working at the Arctic Research Center to assess wildfires in and around the Arctic region (inside of the Arctic Circle and surrounding areas) and their impact on air pollution, and to develop methods to predict them. As an initial result of this research in 2018, his research group clarified the causative factors of three large-scale wildfires in East Eurasia with associated trans-boundary air pollution transport to Hokkaido: e.g., the case of the summer of 2014, as shown in Figure 1. In 2021, his research group further discovered the unique summer climate (atmospheric circulation) pattern only seen in recent years that likely drives co-occurrences of European heatwaves and large-scale wildfires over Siberia and subpolar North America (Alaska and Canada) (see Figure 2).

“When wildfires occur close to inhabited areas, their impact, from direct fire damage to related air pollution, is naturally significant. However, if we can predict wildfires at an early stage, we can prevent or reduce their impacts or take adequate countermeasures when they actually occur; therefore, we are trying to establish research methods to achieve these measures,” says Associate Professor Yasunari enthusiastically. He continues to perform challenging research for the sake of improving the sustainability of humanity in the future in terms of air pollution and climate.

## Relaxation

### Strength training workouts pave a new way for a muscular researcher!

“Outside of my research, I enjoy doing strength training workouts, preferring weight training. It is no longer a hobby but part of my daily life,” says Associate Professor Yasunari. It has become such an essential part of his daily routine that he cannot balance his research and other activities without the training. He also intends to perform various kinds of research using his built muscles as a muscular researcher in environmental science.





# Aiming to be a “real” fighter with mind, technique, and body

“*Bunbu ryodo*” (excellence both in academics and sports), my driving force is curiosity

Alumni Interview



## GOTO Joji

TRIBE TOKYO MMA Mixed Martial Artist

| School of Economics Graduate |

Joji Goto works for a human resource consulting firm while aiming to become a professional mixed martial arts fighter (a sport in which fighters compete using punching, kicking, and ground grappling techniques) in Tokyo. He talks about his memories of his school days, the appeal of mixed martial arts, how he decided to work for a private company, and why he became a double jobber.

### — How did you become a mixed martial arts fighter?

I had been doing karate since I was in elementary school. In my second year of high school, I watched a martial arts practice session at a ward gymnasium, which caught my interest. So, I said, “I want to try it too,” which was my first encounter with

the sport. Later, when I was a university student, I was asked, “Don’t you want to try it professionally?” So, I began training at a gym where there were professional fighters.

### —What attracts you to mixed martial arts, and what are your current goals?

It is not a hugely popular sport among the masses, but I think the sport allows me to fully project my emotion into the sport. It is of course a deadly sport that is more dangerous than regular boxing or karate, and is also associated with more injuries. However, it has an appeal that outweighs the risk of winning or losing, living or dying.

My dream is to have a match that people will remember

even after I have died. I hope to have a match that will remain in someone’s mind, even if it is just one person among the tens of thousands of spectators at the venue.

I am currently ranked No. 2 in the Pacific Rim mixed martial arts tournament “Shooto,” and I aim to win the domestic championship this year.

### —What motivated you to apply to Hokkaido University?

In high school, my life mainly consisted of mixed martial arts (*laughs*). After failing the entrance exam, I attended a prep school, where a teacher in charge of ethics and political economy taught me for the first time how much fun studying can actually be. I then became completely absorbed in my studies and studied all the time, but I have only pleasant memories of my prep school days. That is when I became interested in how the world works, including the economy. I also wanted to attend the best university in Hokkaido.

### —How did you spend your time as an undergraduate student?

I was mostly engaged in mixed martial arts. My clearest memories are those of the university festival in my first year and the undergraduate seminars, and the various part-time jobs I did at times to earn money for training and expeditions, including tutoring and working as a waiter at a restaurant.



### —I hear you went to Canada and had a hard time.

Someone I met at one of the matches told me, “If you want to get stronger, come to Canada,” so I saved up the money for an airline ticket and went. I went to a gym in Montreal where the coach was considered to be the best in the world.

However, the person I had in mind was not there, and I was stranded without a cell phone or money. Nevertheless, I spent one month training at the gym. Other trainees in the same dormitory wanted to become professionals, and their successes inspired me. Young people from all over the world gathered there, eager to be initiated into martial arts, and the common language was martial arts. Training there gave me the confidence and experience that I could jump into a place where there was nothing.

Players at our gym are strongly overseas-oriented. Therefore, if there are strong fighters outside Japan, I want to be strong enough to compete with them.

### —Why do you work in a private company?

I feared that my major goal of becoming a real fighter who can compete in fights that people will remember is precarious



due to my unstable financial situation, and thought that if I do not have to worry about my finances, it would be possible for me to pursue my ideal of mixed martial arts to the fullest.

I am currently working for a human resources consulting firm, helping job seekers realize their potential and matching them with companies. The firm understands my lifestyle of balancing work and martial arts as long as I do my job well. I can work during non-practicing hours and also communicate remotely with the office.

There is a synergy between the business of human resource support and mixed martial arts. Considering the aptitude and potential of job seekers is inextricably linked to considering the strengths and weaknesses of one’s opponents in martial arts. They also share the problem-solving aspect of making that which cannot be done doable.

### —What do you do between practice and work?

I love reading “*Darakuron* (the Fall)” by Ango Sakaguchi, partly due to the influence of a senior trainee at the gym. I also like Yukio Mishima’s “*Kinkakuji* (the temple of the golden pavilion).” I admire people who question and reconsider the trends of the times. As for music, I like Eikichi Yazawa (a rock singer).

I also love the sauna. I have been to all public bathhouses in Sapporo, and last year I even went to Okinawa Prefecture to take a bath. I enjoy being refreshed and like the environment where one is not connected with anyone despite living in an era when it is easy to connect with anyone.



### —Finally, what would you like to say to the students of Hokkaido University?

I have some regrets in this regard, but wish to tell students to cherish the opportunity to forge friendships now. I also realize that I should have studied harder at first – from the perspectives of both a martial arts fighter as well as a worker. I want students to challenge themselves with all the options before them.

#### PROFILE

Born in Hokkaido in 1996. After graduation from Hokkaido University’s School of Economics and Business in 2019, moved to Tokyo. While working for a human resources consulting firm, practiced extensively with top professionals at the mixed martial arts gym, “TRIBE TOKYO MMA.” Made professional debut in September 2020, and is currently ranked fifth in the world in the bantamweight division.



## A bridge between Hokkaido University and the world

This issue features contributions from Mr. Toshihide Ano, who is active as a Hokkaido University ambassador in Thailand, and Dr. Suefong Lin, who is active as a Hokkaido University ambassador in Taiwan.



**Mr. Toshihide Ano**

President, Sojitz Automotive Group (Thailand) Co., Ltd. Chairperson, Hokkaido University Bangkok Alumni Association

In 2019, I took over the presidency of the Hokkaido University Bangkok Alumni Association from Mr. Fujihara, my predecessor. At that time I was approached to become an Ambassador of the Hokkaido University Bangkok Alumni Association. I have helped organize get-togethers for Hokkaido University alumni in Thailand whenever they visited Thailand for international internships, and I have also accepted international internships at my workplace.

I have the impression that Hokkaido University is now making a wide range of international efforts, including programs such as Nitobe College, which aims to nurture internationally active human resources. We have received two internship students, both of whom have learnt a great deal in just two short weeks, but they have been able to absorb so much and have impressed us with their final presentations before returning home. I could not have imagined such a situation when I was a student.

I hope that when the situation of the COVID-19 pandemic

improves and freedom of travel is restored, the students will come to Thailand again. I would like to help young students to have a good experience for the future.

During the COVID-19 pandemic, Thailand has taken enforcement measures such as placing business restrictions on restaurants and businesses involving customer service, but the ban on almost all business activities has been lifted since July of this year. However, Thai people are still wary of the coronavirus and seem to be taking precautionary steps such as wearing masks and avoiding the crowded areas. In addition, the meal delivery business by motorcycle has grown significantly in the COVID-19 era. This meal delivery service has become an established part of daily life, and even now that government restrictions have been eased, meal delivery services and other daily necessities are still very active.

The climate is very different between Bangkok and Sapporo. I am from Hokkaido and I long for a cold season. Bangkok is an urban city, so I can live in the same

way as in Sapporo with little inconvenience. Thailand is a Buddhist country with many temples and Buddhism is deeply rooted in the lives of Thai people. Perhaps because of this, I feel that there is a strong sense of helping the weak and helping each other. Thailand is also blessed with an abundance of fruits. You can enjoy fruits such as mangoes at affordable prices that are unthinkable in Japan. In addition, there are many golf courses in the vicinity of Bangkok, which provide a place for exchange among Hokkaido University alumni.

I visited the Hokkaido University campus in 2018 for the first time in about 20 years and took a good look around. Naturally, it had changed a lot compared to my student years, but I was surprised to see that the trees in front of the Faculty of Agriculture had grown so thick that the whole view of the Faculty of Agriculture building was no longer visible from the main road. I would like to visit again if I have the chance.



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1. Floating market near Bangkok.
2. Elephant ride for tourists in the ancient city of Ayutthaya.
3. Lantern Festival in Chiang Mai, northern Thailand.
4. Statues of demons at Wat Phra Kaew, a temple in the royal palace.



**Dr. Suefong Lin**

Professor, Law Department, Central Police University. Chairperson, Hokkaido University Taiwan Alumni Association

I was appointed as an Ambassador in 2019 with the kind support of the Hokkaido University's Institutes for International Collaboration, and I felt responsible for activities appropriate to my status as an Ambassador. I wanted to introduce Hokkaido University to young people in Taiwan to motivate them to study abroad, and at the same time, to provide support to Hokkaido University-related parties who are staying in Taiwan.

However, due to the COVID-19 outbreak, I have not been able to do much as an Ambassador. In June 2019, before the COVID-19 disaster, there was a gathering of Ambassadors and a dinner meeting between ambassadors from different countries and international students from the same countries was arranged by the department in charge of international relations of Hokkaido University. There, we learned about the problems that the international students were facing and were able to discuss solutions with the executives of the Hokkaido University Taiwan Alumni Association. I think this exchange event between Ambassadors and international students was very much appreciated.

At my university, the faculty, staff, and students are required to take and record their body temperature immediately after entering the campus and are encouraged to manage their own health. In addition,

off-campus visitors are required to pass through a thermometer located at the main gate of the university, and only those with normal body temperatures are allowed to enter the university. In spite of this situation, I would like to promote Hokkaido University at universities in Taiwan as much as possible and give advice to students who are interested in studying at Hokkaido University.

I live in Taichung City, which is said to have the best weather in Taiwan. I have always wanted to experience life in the North, and I decided to ignore the concerns of my parents and friends and came to Sapporo to study at Hokkaido University. One of the reasons was the climate. I felt that the four seasons in Taichung City do not change much and the city is always green—making it in some ways less interesting and less enjoyable than Sapporo, which has four distinct seasons. I had never seen snow before coming to study in Japan, so when I saw snow for the first time, I thought I was dreaming.

Taichung City is located in the center of western Taiwan and has been praised as a "cultural castle" or "little Kyoto" for many decades because of its fine weather and the comfortable lifestyle of its citizens. My alma mater, National Chung Hsing University\*, is the only national university in Taichung City. The relationship between National Chung Hsing Uni-

versity and Hokkaido University is very close, although I was unaware of this fact during my study at Hokkaido University in 1989. The predecessor of National Chung Hsing University was the Government-General of Taiwan's Advanced Academy of Agronomy and Forestry, established in 1919 during the Japanese colonial period (renamed Government-General of Taiwan's Taichung Advanced Academy of Agronomy and Forestry in 1944). The largest of the four affiliated forests was the Hokkaido Imperial University Experiment Forest. With its beautiful scenery, National Chung Hsing University and its affiliated forests have become popular tourist attractions, especially the Huisun experimental forest station, which is now open to the public with lodging facilities and coffee shops, and is very popular with Taiwanese people for its fresh air and scenic beauty.

In any era, the ambitions of young people are the driving force of social progress, so I believe that Dr. Clark's phrase "Boys, be ambitious" will remain important for the members of Hokkaido University.

\*University reform in Taiwan resulted in the Taipei Campus of the National Chung Hsing University, including the College of Law and Business becoming independent in 2000 and becoming the current National Taipei University. Later, the National Chung Hsing University in Taichung City added the College of Law and Politics and established the Department of Law.



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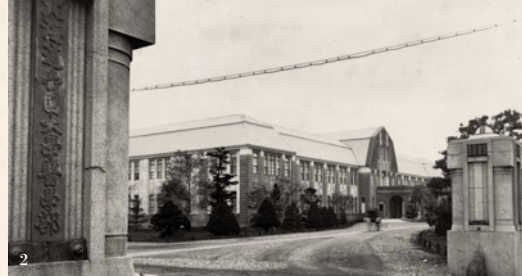
1. College of Law and Politics, National Chung Hsing University (Social Science and Management Building).  
(Photo: Wang Yung-chi, provided by College of Law and Politics, National Chung Hsing University)
2. Huisun Experimental Forest Station.  
(provided by Gallery of University History, National Chung Hsing University)
3. Taichung Yanagawa Waterway.  
(provided by: Tourism Bureau, MOTC, Taiwan)
4. Taichung Central Park.  
(provided by: Tourism Bureau, MOTC, Taiwan)



# 140 years of Challenge

SCENE-17

1898-1924

Opening Hokkaido  
Imperial University

1. School buildings and schoolyard of the Agricultural College of Tohoku Imperial University in Sapporo (1917, Hokkaido University Archives)
2. The Medical Clinic attached to the School of Medicine, Hokkaido Imperial University (the 1920s, Hokkaido University Archives)
3. Faculty of Medicine of Tohoku Imperial University in Sendai (around 1915)
4. Entomology laboratory of the Agricultural College (around the 1910s, Hokkaido University Archives)
5. Land survey practice in the Department of Civil Engineering at the Agricultural College (around the 1910s, Hokkaido University Archives)
6. Reading room in the College Library attached to the Agricultural College (around the 1910s, Hokkaido University Archives)
7. Agricultural economics practice at the Agricultural College (around the 1910s, Hokkaido University Archives)
8. Agricultural chemistry experiment at the Agricultural College (around the 1910s, Hokkaido University Archives)
9. Main office and Faculty of Science of Tohoku Imperial University in Sendai (around 1915)
10. The front gate of Hokkaido Imperial University (1919, Hokkaido University Archives)

## Call for the establishment of a university in Hokkaido

The request to establish a university in Hokkaido was made during the time of Sapporo Agricultural College. In 1898, the school's guide magazine "Sapporo Agricultural College," published by the Agricultural College students, included a chapter titled, "Discussing the need for a Sapporo Imperial University." At a meeting of volunteers campaigning for the establishment of a university on June 27, 1899, Principal Shosuke Sato stated, "If we want to establish a university in Hokkaido, we must start working on it as soon as possible. It will take 15-20 years to gather people with the unwavering motivation to establish a university in Hokkaido." Calls to establish a university came from all directions centered in Sapporo.

Since the Government and the Ministry of Education positioned an imperial university as an institution consisting of several colleges (departments), it was difficult to promote the Sapporo Agricultural College, which only offered agricultural courses, to the status of a university as such. At the same time, there was a strong social demand for another imperial university to follow the Tokyo and Kyoto universities to expand higher education, and discussions were underway to establish new imperial universities in Kyushu and Tohoku. These discussions, combined with the issue of promoting the Sapporo Agricultural College to university status, led to the establishment of Tohoku Imperial University in 1907 in Sendai by combining the Sapporo Agricultural College and the Science College of Sendai.

## Increasing momentum to become an independent university

In his address at the opening ceremony of the Agricultural College of Tohoku Imperial University, the Minister of Education, Nobuaki Makino, stated, "This Agricultural College was established as the foundation for Hokkaido University to become independent in the future. We urge all students to do their best to achieve good results at this university." Those concerned had incorporated the establishment of an independent university into their vision for the future of the agricultural University.

Following the Agricultural College in Sapporo, Tohoku Imperial University opened the Faculty of Science in 1911 and

the Faculty of Medicine in 1915, both in Sendai. After it was decided to establish the Tohoku Imperial University Faculty of Medicine, the Hokkai Times reported on November 27, 1914, "When the Faculty of Medicine is established in Sendai, Tohoku Imperial University will become a university-like university, including the existing Faculty of Science. There will be no need to keep the Agricultural College, which has a different history and school culture." The paper argued that with several schools aligned in Sendai, the time had arrived for Sapporo Agricultural College to become independent. It then became an issue in which other field a new college should be established in addition to the Agricultural College.

## Which of the school of medicine, science and engineering, or law and literature should we set up?

The paper first pointed out that "the science and engineering department offers various advantages in terms of common professors, saving the cost of equipment and instruments, and the

**"Hokkaido Imperial University was founded under the system of independent general education, as one of the five imperial universities in Japan, and has become an authority in address at the first celebration of the founding of Hokkaido Imperial**

fact that the existing Agricultural College already incorporated the basic subjects in the science and engineering field." The Agricultural College offered botany, zoology, entomology, horticulture, agricultural chemistry, and other courses related to and flexibly adaptable with science and engineering. There was also a "Department of Civil Engineering," which offered a course for graduates of junior high school only to specialize in civil engineering technology, and those facilities and faculty members could be transferred to the Engineering Department.

On the other hand, the paper mentioned that "in the medical field, the ward hospital, which could become an affiliated university hospital in the future, is surprisingly well equipped." It had been planned to renovate the Sapporo ward hospital more than ten years before. The vision was to equip it with facilities equivalent to a university-affiliated hospital and to transfer facilities and medical staff from the Sapporo ward hospital to the university-affiliated hospital when the School of

Medicine opens. It was pointed out that the cost of establishing a school of medicine would thus be reduced significantly.

The paper continued, "a department of law and literature can be established relatively easily, as it only requires professors and complete library facilities." A department of law and literature also does not require the laboratory and experimental facilities and equipment compared to departments of science, engineering, or medicine. It can be handled with a full complement of professors and a library, making the establishment inexpensive. Graduates of the Agricultural College also occupied important positions as officials in the Hokkaido Government and other government agencies, many of whom were engineers. Since just as many civil servants in central government ministries were graduates of law universities, it was also expected that a new department of law and literature would be established to cultivate senior administrative officials for the Hokkaido and Sakhalin governments.

**of independent general education, as one of the five the academic city of Sapporo." (President Shosuke Sato's University on March 1, 1919)**

## "Appare (admirable)" and "Menmoku (pride)" are our true intentions.

There was much debate on which college should be prioritized. Finally, the paper stated, "we vowed to have at least one or two colleges among science, engineering, medicine, and law and literature by 1918, that is, the 50<sup>th</sup> anniversary of the opening of Hokkaido, and we strive to physically achieve the reality of our slogan of establishing an admirable Hokkaido University." Two years later, on May 3, 1916, "Hokkai Times" wrote, "in short, any school can be established. Hokkaido proudly boasts eleven branch offices and a population of 1,800,000 people, and all Hokkaido people have an earnest desire for an independent local university." In other words, the intention was to establish an independent university in Hokkaido, regardless of the schools included in it. This intention can be seen as the pride of the Hokkaido region, often compared to the "inland of Honshu and the south of Honshu."



**Hokkaido University**  
**HISTORY**  
1898-1924

1898	June	"Discussing the necessity of establishing Sapporo Imperial University" is published in "Sapporo Agricultural College" edited by Gakugeikai.
1899	June	Principal Shosuke Sato advocates the early establishment of a university at a meeting of volunteers.
1907	June	Establishment of the Agricultural College of Tohoku Imperial University (Sapporo); publication of the promotion of Sapporo Agricultural College to the Agricultural College of Tohoku Imperial University
1911	January	Establishment of the Faculty of Science of Tohoku Imperial University (Sendai)
1914	November 27	"Hokkai Times" published an article on the founding of Hokkaido University.
1915	July	Establishment of the Faculty of Medicine of Tohoku Imperial University (Sendai)
1916	May 3	"Hokkai Times" published an article on "the issue of an independent university."
1917	July	The Imperial Diet approved the budget for the establishment of the Faculty of Medicine
1918	April 1	Establishment of Hokkaido Imperial University; transformation into the Agricultural College of Hokkaido Imperial University
1919	February 7	Publication of the establishment of the School of Agriculture of Hokkaido Imperial University (renamed from the Agricultural College) and the School of Medicine
	March 1	First anniversary of the founding of Hokkaido Imperial University
	April 1	The School of Agriculture and the School of Medicine of Hokkaido Imperial University are enacted

## Hokkaido University Archives

This facility collects, classifies and preserves historical documents and records of Hokkaido University. It also conducts investigations and research on its history.



### Sign a collaboration agreement with JAL

On June 7, 2022, Hokkaido University concluded a collaboration agreement with Japan Airlines Co., Ltd. (“JAL”).

This agreement is a partnership between Hokkaido University, which has educational and research functions, knowledge, and technology, and JAL, which had set an ESG strategy in its mid-term plan with the commitment to contribute to local communities. This agreement also involves the initiative to create a sustainable society by working together to solve various social issues in Hokkaido.

The agreement signing ceremony was attended by JAL Representative Director, President Yuji Akasaka and two other executives of JAL, and President Kiyohiro Houkin and Executive Vice President Junji Yamaguchi from Hokkaido University. The ceremony was moderated by two graduates currently working as JAL flight attendants.

The University and JAL will continue to collaborate in the future, focusing on global warming countermeasures, regional revitalization, and human resource development.



President Houkin (left) and President Akasaka (right) holding the agreement.



Yumeno Saito (left) and Reina Sakai (right), graduates of the University who are working as flight attendants.



President Houkin expresses his ambition.

### Professor David Wolff of the Slavic-Eurasian Research Center receives the Humboldt Research Award

Professor David Wolff of the Slavic-Eurasian Research Center was awarded a Humboldt Research Award, a first for Hokkaido University’s member. This award is one of Germany’s most prestigious scientific honors that has been established by the Alexander von Humboldt Foundation and is fully funded by the German government.

The award was made for Professor Wolff’s lifetime research achievements on the topic of the “History of Russia’s activities in Asia during the long 20<sup>th</sup> century.” As an outstanding example of this approach, the Foundation cited his monograph “*To the Harbin Station*” (pictured below), considered a fundamental text of the new imperiology. Professor Wolff has collaborated with the German Historical Institute Moscow in its North Pacific

initiative and served as editorial advisor on a book series about the North Pacific at Heidelberg University. These activities and a long list of innovative publications over the past thirty years were highly regarded.

“I hope this award will spread the impact of the Center and Hokkaido University from Munich to other universities in Germany and from Germany to other research centers in Europe,” commented Professor Wolff.



Professor Wolff



Professor Wolff’s book “*To the Harbin Station*” (Kodansha, 2014)  
Japanese translation version of his book “*To the Harbin Station*” (Stanford, 1999)



## Lively campus

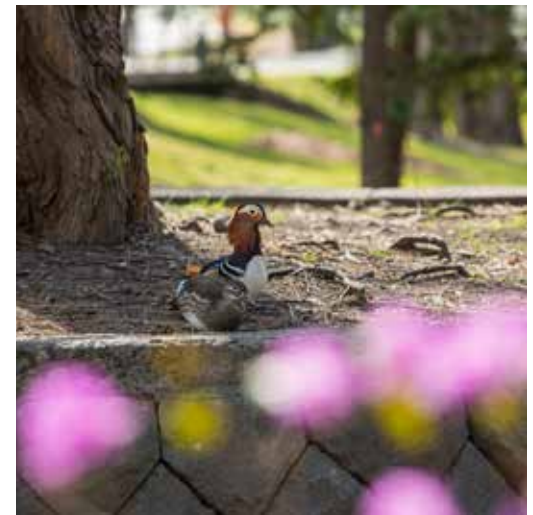
Photographer: Hiromi Terashima



a



b



c



d



e

On June 3-5, the Hokkaido University Festival was held face-to-face for the first time in three years. Although the festival was held amid various restrictions, such as requiring reservations, many people visited the campus.

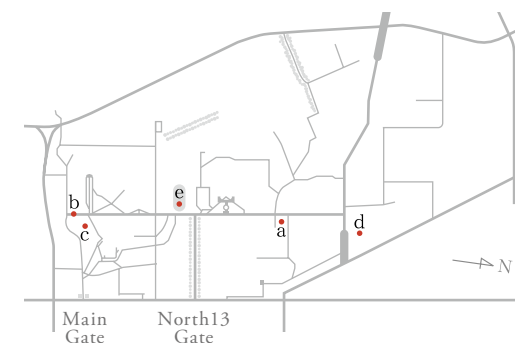
In August, the campus is open to the public for Open Campus and the Hokkaido Marathon.

The campus that had been quiet until now is gradually becoming more lively.

Note: For videos showcasing the natural splendor of the campus in different seasons, please visit the University website.



Videos of  
campus views  
QR code



- a. School of Medicine Centennial Hall
- b. Autumn leaves in front of Clark Memorial Student Center
- c. Central Lawn
- d. Enyu Gakusha Community Hall
- e. Ono Pond



